

REMARKS

Claims 1-37 were pending. All were rejected. The Applicants have amended claims 1 and 30, cancelled claim 34 and added new claim 38. Therefore, claims 1-33 and 35-38 are presently pending. The Applicants request further consideration and re-examination in view of the amendments above and remarks set forth below.

Objection to the Drawings:

The drawings were objected to as failing to comply with 37 CFR 1.84(p)(5). Particularly, Examiner alleges that the reference characters 505 and 507 are mentioned in the specification, but are not shown in the drawings.

The portions of the text to which the Examiner refers do not actually mention the reference characters 505 and 507. Rather, the text mentions “504-508.” Since the references characters 505 and 507 are not used in the drawings, it should be apparent that “504-508” refers to reference characters 504, 506, 508. Therefore, the Applicants have amended the specification to replace “504-508” with “504, 506, 508.” The Applicants respectfully submit that no changes to the drawings are necessary.

Objection to the Specification:

The specification is objected to because the abstract uses the word “invention.”

The Applicants have amended to the abstract to avoid using the word “invention” and to shorten its length.

Rejections under 35 U.S.C. § 112:

Claim 34 is rejected under 35 U.S.C. § 112 as being indefinite. Particularly, the Examiner alleges that it is unclear what is meant by “normal activities” and that this could include a person attempting to authenticate themselves.

It should be noted that the Applicants have cancelled claim 34 and substantially incorporated the limitations of cancelled claim 34 into claim 30. Thus, the rejection is moot as to claim 34. However, the Applicants respectfully disagree with the rejection as it may be applied to claim 30. The Applicants’ specification at page 13, lines 12-17, explains that:

[S]amples may be taken over an extended period of time during which the user goes about his or her **normal activities**. For example, image samples may be taken when the wearer uses the device 100 to display time of day. In addition, voice samples may be taken during the normal course of the wearer speaking to others. For example, the user may speak his or her name when answering the telephone or making introductions to others.

(Emphasis added.) Note that none of the examples given are of a person attempting to engage in authenticating themselves. Thus, from this passage and from the specification taken as a whole, it should be clear that the type of activities that are considered “normal activities” in the context of claim 34 (now claim 30) does not include the person attempting to authenticate themselves. As is stated in the Manual of Patent Examining Procedure, Section 2173.02, definiteness of claim language must be analyzed, not in a vacuum, but in light of the content of the particular application disclosure, the teachings of the prior art and the claim interpretation that would be given by one of ordinary skill in the pertinent art.

Rejections under 35 U.S.C. § 102:

Claims 1-5, 7-13, and 18-23 are rejected as being anticipated by International Publication No. WO 98/12670 by Borza et al. (“Borza”).

The Applicants overcome the rejection in part and respectfully traverse the rejection in part. The present invention as recited in claim 1 is directed toward an apparatus for authenticating the identity of a person. See claim 1. However, functionality is included in the apparatus that is in addition to its identity-authentication functions. Applicants’ specification at page 11, lines 1-7. For example, the apparatus may include a wrist-worn display that displays the time-of-day for the user. Images of the wearer may then be captured while the wearer is viewing the display of the device to read the time. Applicants’ specification at page 11, lines 31-32. It is expected that the wearer will have his or her face positioned in front of the device in order to observe the displayed time. Applicants’ specification at page 12, lines 1-2. It is also expected that the images taken in this manner will exhibit consistency in the orientation of the device with respect the wearer, for example, in distance and angle. Applicants’ specification at page 12, lines 5-7. As a result, the confidence in the results in the authenticating the user’s identity are increased without

the user having to take any special steps or even be aware that user is having his or her image captured. Applicants' specification at page 12, lines 7-9.

Thus, claim 1 recites that the apparatus includes a wrist-worn display for providing information to a wearer and an image sensor for obtaining an image of the wearer. In addition, claim 1 has been amended to clarify that the image is obtained when the wearer views the display for the information.

Borza does not suggest or disclose such a feature. Rather, Borza is directed toward a biometric identification system that includes a transmitting module in the form of a wristwatch that is provided with a fingerprint reader. At page 8, lines 16-17 and in Figs. 2, 3 and 4, Borza illustrates and describes in detail how fingerprint scanning is accomplished through a biometric sensor in the form of a matrix of sensing elements. Particularly, an array of sensing elements is provided in which the elements are spaced so that an image of a fingerprint, once scanned, contains all of the required features for analysis. Each sensing element includes a charge-sensing electrode. An over-glass is provided upon which the user's finger is placed to induce charges in the sensing electrodes.

In the wristwatch embodiment of Borza shown in Figs. 5a and 5b, the array of sensing elements are provided on the face of a wristwatch. The array of sensing elements is offset from the time display means or is superimposed upon the time display means. In one embodiment, Borza discloses that the hands of an analog watch are designed to be visible through or between the pads of the sensing elements. Borza, at page 11, line 1 to page 12, line 25.

Borza states that the biometric sensor of the wristwatch embodiment is of the form described and shown in Figs. 2, 3 and 4 or is a conventional capacitive fingerprint scanner. Borza at page 11, lines 16-18. Borza also states, "[f]urther alternatively, the biometric sensing means 53 is an optical biometric scanning device in the form of a retinal scanner, an optical fingerprint scanner, an optical palm scanner, or an other suitable (and portable) biometric sensing device. Borza at page 11, lines 18-21. However, Borza does not provide any disclosure as to when or how these other embodiments could be used to obtain biometric samples. Thus, Borza cannot suggest or disclose the limitation of claim 1 in which an image is obtained when the wearer views the display for information. Rather, in the fingerprint scanner embodiment of Borza, which is the only embodiment that is explained in any detail,

the display would be at least partially obscured when the user's finger is placed on the over-glass since the fingerprint sensor is located on the face of the wristwatch.

Regarding Borza, the Examiner stated that "Retinal Scan described on Page 11, lines 18-22 can occur when user either obtaining the time from looking at the watch or performing something as simple as trying to obtain information on whether he/she is being authorized by the device." (Emphasis added). The Examiner, however, is not applying the correct legal standard for anticipation or inherency under 35 U.S.C. §§ 102-103. As is stated in Section 2112 of the Manual of Patent Examining Procedure (MPEP), "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." (Emphasis in original), citing *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); and *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). In this same section, the MPEP further states that "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" quoting *In re Robertson*, 169 F.2d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

Borza does not provide any teaching of when or how samples could be obtained in embodiments other than a fingerprint scanner. Thus, Borza does not disclose the limitation of claim 1 in which an image is obtained when the wearer views the display for information, nor is this limitation inherent under Sections 102 or 103 as properly applied. The Examiner's reasoning that the limitations of claim 1 can occur in reference to Borza is legally and factually insufficient to support the rejection of claim 1. For at least this reason, claim 1 is allowable over Borza. Claims 2-5 and 7 are allowable at least because they depend from an allowable base claim 1.

Claim 8 recites forming a baseline profile and repeatedly obtaining additional biometric data from the person "in response to the person accessing a portable device for information." As explained above in reference to claim 1, Borza does not provide any teaching of when or how samples could be obtained in embodiments other than a fingerprint scanner. Borza simply does not disclose that any type of biometric data is obtained in response to the person accessing a portable device for information, nor is this limitation inherent in Borza. For at least this reason, claim 8 is allowable over

Borza. Claims 8-13 and 18-23 are allowable at least because they depend from an allowable base claim 8.

Claims 30-32 are rejected as being anticipated by U.S. Patent No. 6,259,805 to Freedman et al. ("Freedman").

The Applicants overcome the rejection by the above amendment to claim 30. More particularly, claim 30 is amended to substantially incorporate the limitations of claim 34. Thus, claim 30 now recites "the baseline samples being collected while the person goes about his or her normal activities." This limitation is not disclosed or suggested by Freedman. The Examiner stated, however, that Borza teaches that baseline samples are collected while the person goes about his or her normal activities since "Retinal Scan described on Page 11, lines 18-22 can occur when user is either obtaining the time from looking at the watch or performing something as simple as trying to obtain information on whether he/she is being authorized by the device which can be considered normal activities." (Emphasis added). Thus, the Examiner rejected claim 34 as being anticipated by Borza in view of Freedman.

The Applicants respectfully disagree with the Examiner's reasoning as applied to claim 34 (now claim 30). The Examiner reasons that because samples can be collected while the user goes about his or her normal activities that Borza teaches this limitation. As explained above in reference to claim 1, the Examiner is not applying the correct legal standard stated in Section 2112 of the MPEP. Rather, inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient to show that the thing is suggested or disclosed by the prior art. Accordingly, the Examiner's reasoning does not support the rejection of claim 34 (now claim 30).

In sum, Borza does not provide any teaching of when or under what circumstances samples are obtained. Thus, Borza simply does not disclose the limitation of claim 30 in which samples are collected while the user goes about his or her normal activities, nor is this limitation inherent under Sections 102 or 103. Freedman does not disclose this limitation either. For at least this reason, claim 30 is allowable over Borza and Freedman, taken singly or in combination. Claims 31-32 are allowable at least because they are dependent from claim 30.

Rejections under 35 U.S.C. § 103:

Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Borza in view of U.S. Patent No. 5,812,067 to Bergholz et al. ("Bergholz").

The Applicants respectfully traverse the rejection. Claims 11 and 12 are dependent from an allowable base claim 8. For at least this reason, claims 11 and 12 are allowable.

Claims 24-26 are rejected under U.S.C. § 103(a) as being unpatentable over Borza in view of Bergholz, further in view of U.S. Patent No. 4,952,928 ("Carroll"). Regarding claim 24, the Examiner states that Borza does not teach sensing that the person is not wearing the device and developing a response when the person is not wearing the device. However, the Examiner reasons essentially that because Bergholz senses the presence of a person sitting in the driver's seat of an automobile to monitor uninterrupted usage and that because Carroll teaches that it would be convenient to wear a biometric sensing device, that it would have been obvious to combine the teaching of Borza with Bergholz and Carroll.

The Applicants respectfully traverse the rejection. Claims 24-26 are dependent from an allowable base claim 8. For at least this reason, claims 24-26 are allowable.

Further, the Applicants respectfully submit that Carroll cannot be properly combined with Borza and Bergholz. Borza is directed to a biometric identification system for providing secure access while Bergholz is directed toward a system for recognizing authorization to use a vehicle. In contrast, Carroll is directed to a house arrest monitor by which Carroll attempts to replace the physical walls and fences with electronic walls and fences. Carroll, col. 1, lines 63-65. The problem addressed by Carroll is entirely distinct from that of authentication and, thus, there would be no motivation to combine Carroll with other references.

More particularly, Carroll discloses an electronic personnel identification and monitoring system that can be used by law enforcement agencies or other supervisory agencies charged with the task of remotely monitoring the location, condition, and activities of a large number of ambulatory individuals located within a relatively large geographical area. Carroll, col. 3, lines 48-68. A significant feature of Carroll relates to monitoring the location of the individual as well as determining whether the individual is complying with mandated restrictions or activities, such as might be ordered by a court of law, a physician, or other supervisory person or agency. Carroll,

col. 4, lines 27-53. Thus, Carroll teaches a tag embodiment to be worn on the wrist of the individual being monitored in which the only way to remove the tag is to cut the strap. Carroll, col. 10, line 65 to col. 11, line 10. A conductor is embedded in the wrist strap to detect whether the user has tampered with the strap by cutting it or otherwise tampering with it. Carroll, col. 11, lines 11-25. Because the monitoring performed by Carroll is involuntary and supervisory, while Borza or Bergholz relate to voluntary authentication, it would not have been obvious to combine these teachings of Carroll for determining when the person has attempted to remove the device with Borza or Bergholz. This is another reason why claims 24-26 are allowable over Borza and Bergholz.

Further, Borza is directed toward biometric authentication for providing secure access. Examples given by Borza include opening the locked door of a house or a car and providing access to a banking machine or a computer. Borza at page 6, lines 23-25. Bergholz is directed toward a system for recognizing authorization to use a vehicle. Bergholz performs continued vehicle-use authorization to prevent car-napping. Bergholz, col. 3, lines 50-56. The difference is that Borza is directed to determining whether to provide access to an individual, and once the determination is positive, the individual is given access, whereas, Bergholz requires continued authorization. Because of this difference, there would be no need or motivation to combine the continued authorization scheme of Bergholz with Borza. This is another reason why it would not have been obvious to combine these references and is thus another reason why claims 24-26 are allowable.

Claims 27 and 28 are rejected under U.S.C. § 103(a) as being unpatentable over Borza.

The Applicants respectfully traverse the rejection. Claims 27 and 28 allowable at least because they are dependent from an allowable claim 24. As explained above, claim 24 is allowable for several independent reasons.

Claims 29 and 33-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Borza in view of U.S. Patent No. 6,259,805 to Freedman et al. ("Freedman"). Regarding claim 29, the Examiner stated that Freedman at col. 3, lines 43-52 teaches updating the baseline sample by additional biometric data when the additional biometric data successfully authenticates the identity of the person.

The Applicants respectfully traverse the rejection. Claim 29 is allowable at least because it is dependent from an allowable base claim 8. Claims 33 and 35-37

are allowable at least because they are dependent from an allowable base claim 30. Claim 34 is cancelled.

Further, claim 8 recites that the additional data is compared to the baseline profile for authenticating the identity of the person, while claim 29 recites updating the baseline sample by the additional biometric data when the additional biometric data successfully authenticates the identity of the person. This combination of features allows the baseline profile to be continuously updated, automatically incorporating new images and other sampled data into the baseline profile so that the baseline profile evolves over time in response to changes in the person over time. Applicants' specification at page 13, lines 27-34.

In contrast, Freedman is directed toward selection of biometric fingerprint samples to serve as a sample reference. Freedman, at col. 2, lines 54-56. Freedman also teaches the use for comparison of samples taken from individuals other than the person to be authenticated but whose biometric information is similar to that of the identified individual in order to detect false matches. Freedman, at col. 13, lines 25-45. The passage of Freedman at col. 3, lines 43-52 cited by the Examiner is in fact directed to this aspect of Freedman in which samples indicative of false matches are identified from within a database of many samples.

Thus, Freedman does not suggest or disclose the limitations of claim 29 that allow the baseline profile to evolve over time in response to changes in the person over time. This is another reason why claim 29 is allowable.

New Claim 38:

New claim 38 is an independent claim similar to original claim 34 (now cancelled). As in claim 29 discussed above, new claim 38 recites updating the baseline sample by additional biometric data when the additional biometric data successfully authenticates the identity of the person. This allows the baseline profile to evolve over time in response to changes in the person over time. As explained above in reference to claim 29, Freedman does not suggest or disclose this feature. Therefore, claim 38 is allowable.

Conclusion:

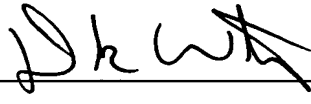
In view of the above, the Applicants submit that all of the pending claims are now allowable. Allowance at an early date would be greatly appreciated. Should any



outstanding issues remain, the examiner is encouraged to contact the undersigned at (408) 293-9000 so that any such issues can be expeditiously resolved.

Respectfully Submitted,

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